

NAVAL WARFAR COLLEGE
RESEARCH PAPER

NAVAL MEDICINE--THE NEGLECTED SPECIALTY

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ABSTRACT

The origin and development of Navy responsibility for medical care is sketched. The role of the naval medical officer with the operating forces, both as a doctor and as a naval officer, is discussed at length. Examples are offered to establish the proposition that Naval Medicine is a specialty for which normal medical education does not provide adequate preparation.

The historical development of special training programs in naval medicine is presented, particularly in respect to the U. S. Navy. It is pointed out that this training has been drastically curtailed since World War II. The reasons are discussed, and it is noted that a trend to redress the situation has commenced.

Current training programs in seven of our allied navies are reviewed and it is seen they are all much more extensive than the USN program.

It is asserted that junior medical officers now being assigned to the operating forces frequently lack motivation and the technical background to effectively assume their responsibilities. Supporting opinions of responsible medical and line officers are cited. It is proposed that a 12 week training course be introduced to cope with the problem.

The medical personnel picture is discussed, and the manpower shortage is described and analyzed. A training goal of 300 officers annually is assessed, and the detailing feasibility is explored.

A 12 week course designed to more adequately prepare officers for sea and field duty is outlined.

It is concluded that present training programs are inadequate, and that a substantial decrease in medical readiness in the fleet and field has resulted. It is also concluded that a 12-week course, presented three times a year, could afford the requisite training to all medical officers annually assigned to general duty with the operating forces, at a cost of about 2.3% of our clinical manpower.

It is recommended that such a course be established.

The detailed outline of a one-week course in Naval Law for Medical Officers, prepared by the U. S. Naval Justice School, is appended.

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INTRODUCTION

This paper deals with only a small sector of the total medical effort of the U. S. Navy. It deals with the provision of direct medical support in the Operating Forces. Certain deficiencies in this support exist today, and an attempt will be made to examine their genesis, evaluate their seriousness, and suggest a remedy. The practice of medicine in the Fleet and Field is a specialty which is being neglected.

The United States Navy Medical Department operates the finest network of Naval Hospitals and dispensaries in the world. The system includes some twenty-six hospitals, and several hundred dispensaries of all sizes, staffed by almost 3,000 well-qualified and hard-working naval doctors. Through extensive encouragement of graduate training, large numbers of Naval Medical Officers have been able to achieve certification as specialists in all of the many medical disciplines. This chain of hospitals and dispensaries, with their excellent professional staff, comprises a system of which the Navy and the Nation may well be proud. Another 580 doctors work at sea, or with the Fleet Marine Force. It is with this group that the paper concerns itself.

A young man who was later to become the first Chief of the Bureau of Medicine and Surgery, wrote in 1814,

"As I was at that time a perfect novice in the routine of ship duty, and having then but recently left the Pennsylvania Hospital, an institution in which order, system, and punctuality render the practice of medicine a pleasure, I was overwhelmed with the difficulties I had to encounter in the performance of professional duties, where every species of inconvenience that can be imagined was opposed to the exertions of the surgeon. My feelings revolted from the idea of continuing in such a perplexing and distressing situation--and I became disgusted with the unavailing toil attendant on ship practice."

Have we made no progress in 150 years? Many a young medical officer echoes those sentiments today.

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The opinions expressed in this paper are those of the author; they should not be construed to necessarily reflect the views, or to bear the approval of, any of the individuals mentioned above, the Bureau of Medicine & Surgery, or the Naval Service at large.

CALL FOR MEDICAL RESEARCH IN THE NAVY

INTRODUCTION

MEDICAL RESEARCH IN THE NAVY

The concern of the Navy for its sick and injured seamen is no recent development; and indeed, the first, U.S. Navy Hospital, our first naval medical center, when Lt. John Hall, M.D., visited the Nile and Rattlesnake Bay to the westward in 1795.¹ The first naval Hospital of record was established in 1834 at Syracuse, Sicily, to support the Mediterranean Squadron. This was the first of the Navy's Hospitals; even before that, naval medical care was provided in the Marine Hospitals (forerunners of our Public Health Service) established under a Congressional Act of 1798.²

The responsibility of the Navy for its sick and injured is an ancient one, which developed on the Island of Rhodes about 400 B.C. Rhodes was a major commercial and naval power among the Greek States, and home port of the magnificent galley fleets. The Mediterranean galleys were well equipped by the time Alexander's empire collapsed, and spread rapidly through the Hellenic world during the decline of Greek political power. They were also used by Rome, and subsequently by later Mediterranean nations. The great Rhodes' galleys and both fleets at Lepanto.

¹Charles F. Brown, *John Hall, M.D.* (New York: Doubleday, 1943) 170

²Louis F. Roddis, *A Short History of Naval Medicine* (New York: Paul B. Hoeber, Inc., 1941) 2.

The ubiquitous Norse raiders carried the laws back to the Baltic, and they were incorporated in the medieval maritime codes of Gotland, Wisby and Dantzic. Centuries after the Romans departed England and France, Eleanor of Aquitaine re-introduced the Rhodian maritime laws to both countries; she had encountered them in the Latin Kingdom of Jerusalem during the ill-starred Second Crusade. These laws formed the basic legal code for the maritime courts of Aquitaine, seated at Oléron, between LaRochele and Bordeaux. Richard Lionheart, her son, gave formal approval to the Oléron Code for England in 1194 upon his return from captivity.³

A direct relation exists between today's Naval Regulations and those ancient laws.⁴ They dealt with many phases of shipboard life, including medical care. The earliest copy extant of the Oléron version, as used in England, is contained in the "Admiralty Black Book", which has been dated about 1350. The Code, in this book, appears in Norman French. The first known English translation is found in "The Rutter of the Sea" by T. Petyt (1536). Consistency was not then a requirement in orthography. Article Seven, covering medical care, went as follows:

If it chaunce that any maryner be taken with sekenesse in the ship doyng service thereto be belongyng, the maister ought to set hym out of the shyp, and seke lodgyng for hym, And ought for to fynde hym lyght, as talowe or candell, and to gyve hym a lad of the shyp for to take hede of hym, or hyre a woman to kepe hym; and ought to purvey hym of suche meat as is used in the shyp, that is to wyte, as moche as

³J. J. Keevil, Medicine and the Navy, 1200-1900 (Edinburgh: E. & S. Livingstone Ltd., 1957) I ppl-3

⁴Leland P. Lovette, Naval Customs Traditions and Usage (Annapolis: United States Naval Institute, 1950) pp69-76

he toke whan he was in helth, and no more, but yf the mayster wyll And yf he wyl have deyntyner meates the mayster is not bounde to gete hym any, but to be at his costes. And yf the shypp be redy to departe, it ought not to tarry for hym, and yf he recover, to have his hyre in payinge and rebatynge that the mayster layd out for hym. And if he dye his wyfe or next kynne or frende oughte to have it for hym. The judgement is suche.⁵

This article lays the foundation for naval medical care and was, in fact, the legal authority on which British Naval medical policy was based for 500 years. Remarkable as the article is, in an otherwise harsh and brutal code, it contains a fatal weakness which cost England the lives of thousands of her seamen over the centuries. The article does not require the master to provide the sick quarters; it only enjoins him to "seke" lodging, and to furnish certain amenities. Our own Navy employed this deficient system in its earliest days, and many receipts for private lodging of sick and injured men may be found in the old files.^{5a} In Britain, sick and injured seamen were quartered at first in ecclesiastical "Houses of Mercy". After the Disestablishment, responsibility for providing sick quarters fell on individual cities and towns. The famous hospitals of London repeatedly had to empty themselves of civilians to make room for naval patients after major sea battles. Space was never easy to acquire, and the records of the shabby treatment and callous neglect of her sick and wounded sailors dims many of England's proudest victories. The calamitous sick rate, and the thousands of

⁵T. Petyt, The Rutter of the Sea, (London: 1536) as quoted from Sir Travers Twiss, ed. The Black Book of the Admiralty, Rolls Series, (London: 1871-76), I, p95 by Keevil, I, pp2-3

^{5a}Roddis p261

penniless dying seamen dumped on civil authorities a few weeks after the defeat of the Armada became a national scandal. Particularly important, and scandalous, was the fact that scarcely a hundred⁶ had been wounded in battle; the great majority were victims of the rotten rations and unbelievably unhygienic conditions aboard the ships. A few weeks in these floating pest holes decimated the crews. Naval hospitals, in the modern sense, did not appear until more than a century later, when Colbert, Louis XIV's great Minister of Marine, established one at Rochefort in 1666.⁷

The responsibility of Naval (and Merchant) Services toward their sick and injured seamen is thus seen to be an ancient one, universally accepted in the Western world. The establishment of Naval facilities ashore for this care is a much more recent development, and is not universally accepted. The responsibility to provide dependent care is a very recent development, and even less universally accepted. The management and staffing of our own great Naval Hospital system does not present aspects so patently unique as to preclude the possibility of non-Naval systems of management. Germany operates her military hospitals under a tri-service arrangement, with no dependent care.^{8,9}

⁶Winston S. Churchill, A History of the English Speaking Peoples (New York: Dodd, Mead, 1956) II, p131

⁷Roddis, p253

⁸J. H. Stover and K.E.A. Seemann, Military Medicine in the Federal Republic of Germany, January 1962, Office of Naval Research Technical Report ONRL 9-62 (London: American Embassy 1962) p27, p37

⁹Hawickhorst, ed., Taschenbuch für den Sanitäts--und Gesundheitsdienst der Bundeswehr 1961 (Darmstadt: Wehr u. Wissen Verlagsgesellschaft, 1961) p34

Norway and Sweden send their naval patients to civil hospitals. ^{10,11} Much of the British Royal Navy dependent care load is absorbed by the National Health Service. As a matter of fact, the Hoover Commission recommended that the hospitals of our Armed Forces be amalgamated with other government hospitals into a federal hospital system under a "United Medical Administration". ¹² After carefully examining this proposal, the Congress declined to accept it. The Navy medical system has been the target of an almost unbroken series of investigations since 1945. ¹³ With the current emphasis on Defense Agency centralization, it would be fatuous to assume that the military medical care system will escape further scrutiny.

¹⁰ J. H. Stover, Norwegian Armed Forces Medical Services, Office of Naval Research Technical Report ONRL-55-60 (London: American Embassy, 1960) p1

¹¹ Interview with Com. Lars Troell, Surgeon General, Royal Swedish Navy, and staff. (Stockholm: 1960)

¹² The Commission on Organization of the Executive Branch of the Government, Reorganization of Federal Medical Activities (Washington: U.S. Govt. Print. Off., 1949) p20

¹³ USN Bureau of Medicine & Surgery, The History of the Medical Department of the United States Navy, 1945-1955, NavMed P-5057 (Washington: U.S. Govt. Print. Off., 1958), p221

CHAPTER II

THE NAVAL SURGEON

There is one element of Naval Medical Care which is unique, and which may be stoutly defended against the strongest arguments for standardization and unification. That is the practice of medicine in the Fleet and with the Fleet Marine Force. In fact, the provision of doctors competent to conduct this practice--particularly in time of national emergency--is one of the many strong arguments for retention of the Naval Hospital system. Curiously enough, it is precisely this element of Naval Medicine which is receiving relatively little support today.

Yesterday's Naval Surgeons

The unique status and special problems of Naval Surgeons form a fascinating chapter in medical history. Roman ships' surgeons received a double pay scale, and were legally designated as non-combatants. Early medieval naval and port surgeons of the Mediterranean originated Quarantine, Ships' Bills of Health, and Practique. The very detailed tables of allowances, equipment, and muster rolls of the Armada, which are still in existence, show that the fleet carried 85 surgeons, as well as pharmacists and hospitalmen, and that there were two hospital ships. One of these, the San Pedro el Mayor, was shipwrecked at Salcombe, near Devon, England, during the disastrous homeward retreat of the Spanish Fleet. Since medical support at this level was unknown in the English Navy, great excitement was caused by this event, and efforts were made to salvage the medical stores. Special representatives of the Privy Council were ordered to the area, and furnished the Council

letter reports still extant.¹ Part of this interest was undoubtedly stimulated by the medical disaster, previously mentioned, which had already overtaken the English Fleet.

English Naval Surgeons began to appear in Tudor days. Until the "Henri Grace a Dieu" (the "Great Harry") was built in 1514, warships functioned chiefly as transports; and army personnel greatly outnumbered the ship's company. Army surgeons embarked with the troops, and occasionally commented on sea problems. With the "Great Harry", and the mounting of naval ordnance, ships acquired the capability to engage at sea, in addition to landing assault forces. Large crews were needed to man the guns and, due to the unbelievably crowded conditions aboard, almost any hit by an enemy caused casualties. A print of the "Great Harry" appears in Trevelyan.² Although she displaced only 1500 tons, about the size of a WW II destroyer escort, she carried 900-1,000 men, or four times as many as the DE. These crowded conditions and the high risk of wounding in action led to a need for shipboard doctors.

It gradually became customary to call up surgeons for combat sea duty--often under the Press Laws--at the same time that crews were "recruited" by that infamous method. The concept that ships' doctors were required to care for the sick, who almost always greatly outnumbered the wounded, was hardly even considered. This was the job of the Captain of the vessel. Over a century passed before permission was

¹ John Knox Laughton, ed., State Papers Relating to the Defeat of the Spanish Armada, Anno 1588, (London: Naval Records Society, 1894), II, pp289-294

² F. M. Trevelyan, Illustrated History of England (London: Longmans, Green, 1958), fig.62

granted for ships' surgeons to have stores of drugs and to practice "physick" on board. This permission was granted by the Privy Council on July 10, 1626, after generations of outstanding Captains and "Gentlemen Adventurers" such as Drake, Hawkins, Frobisher and Raleigh had vainly combatted the various "agues", "fluxes", "calendaturas" and the scurvy, which killed off their crews. The date is an historic one. Despite the long-standing and bitter division between the surgeons and apothecaries ashore---fully supported by the courts---this was recognition at the highest level of British officialdom that medical problems at sea were equally as important as surgical problems. It recognized that special privileges as well as special supplies must be accorded the sea surgeons, even though such action flew in the face of ancient and Royal guild privileges harking back 300 years. This crucial decision laid the foundation for Naval Medicine in England, and firmly established the Sea Surgeon in his role as a specialist, essential to the successful operation of the Navy.³

The Modern Naval Surgeon and His Role

The role of the Naval Surgeon on the fighting team is simple to define; his basic responsibility is to maximize the manpower available to the commander. This is formally stated in Naval Regulations as "(The medical officer)...is responsible, under the commanding officer, for maintaining the health of the personnel"^{3a}; specific responsibilities are detailed in the Manual of the Medical Department. The naval doctor's job was succinctly stated by Medical Director C.P. Gatewood, USN, back in the

³ Keevil, I, p176 et seq.

^{3a} Art 0969

days of the Great White Fleet, "to keep as many men at as many guns as many days as possible."⁴ This statement was adopted as the motto of the Medical Corps by Surgeon General Rossiter, and appeared on the mast-head of the Naval Medical Bulletin for many years. The advent of nuclear power has not altered the dictum. The task, although simple to state, is not simple of execution. The principal activity of doctors in civil life is the treatment of disease and injury; relatively few occupy themselves to any great extent with preventive medicine. For the naval surgeon, however, preventive medicine in its broadest aspects is his primary responsibility. A man in sick bay, no matter how skillfully treated, is a man away from his duty station. The more effective a ship's surgeon, the smaller his sick list and binnacle list.

The prevention of disease and injury aboard ship or in the field calls for many skills and much information rarely taught--or hardly emphasized--in medical school, during medical internship, or in hospital practice. The young doctor finds himself in a completely new frame of reference, with many problems foreign to his previous training and experience. Not the least of these is the ability to effectively convince other individuals, often his seniors, with non-medical backgrounds, of the wisdom of certain actions. Only under very limited circumstances can the naval surgeon issue an order; many of his most important preventive medicine measures consist of recommendations which he must persuade others to accept. Samuel Eliot Morrison, in a recent description of

⁴Roddis, p236

the disastrous First Battle of Savo Island states "...the two cruiser groups...were steaming at low speed on their monotonous patrol courses. Officers and men were dog tired after being at general quarters for forty-eight hours." Morrison argues that fatigue was a major factor in permitting the surprise attack. The losses were four heavy cruisers, one destroyer, 1270 officers and men killed, 709 wounded.⁵ The medical officers of Admiral Turner's force must share the heavy responsibility for this defeat; they were not able to induce him to rest his crews before moving into the area of maximum danger.

A phase of preventive medicine rarely emphasized in medical school is the field of "industrial" medicine. Modern ships are huge machines, full of hazards, both well and ill defined. The medical officer bears a responsibility to indoctrinate ships' personnel in appropriate safety precautions and accident prevention techniques⁶, to ensure that as few men as possible are injured. How many medical schools emphasize, or how many budding doctors are interested, in the fact that tri-chlor ethylene, for instance, is not only an excellent solvent, but also a dangerous respiratory poison? Yet it is a common naval store. What young doctor reporting from civil life realizes that he should not only know about the toxic stores aboard--but even more important--that he

⁵S.E. Morrison, "Guadalcanal--1942", The Saturday Evening Post, 28 July-4 August 1962, p22

⁶U.S. Navy Manual of the Medical Department, NavMed P-117, (Washington: Govt. Print. Off.), para 22-4

himself should observe the practices of the personnel employing them?⁷

Use of trichlorethylene to clean a tank bottom resulted in the collapse of a half dozen men on the West Coast recently, and death of a senior petty officer, who repeatedly entered the space to rescue them. The doctor is well aware of his own dangerous drugs and narcotics, and will normally ensure that they are locked up, and periodically inventoried. It may not occur to him that hazardous materials exist on board, equally capable of causing mischief if improperly safeguarded and employed.

Many more esoteric "industrial" hazards abound aboard ship; practically every new technical development engenders new health problems. How long can a man watch a radar screen without eye damage? What power levels of radiation from the ship's antennas can be tolerated by topside personnel? Suppose there is a fire or explosion in the nuclear weapons magazine; can rescue personnel safely enter? What are the radiation and other hazards? What temperatures can be tolerated by rescue or repair personnel in a compartment with a high pressure steam leak? How do you recognize brass fume fever in a foundryman? What can the medical officer do about an old Chief who doesn't enforce the safety rules in his machine shop? Scores of similar industrial medicine problems face the newly-assigned doctor, and they multiply yearly. Safety regulations exist for most of these problems, but preventable accidents have undoubtedly occurred because the doctor was not alert enough to see that a hazard existed for which there were no regulations. When the doctor does see a

⁷U.S. Navy Regulations 1948 Art 0970-3 requires MO report to the commanding officer "any condition within the command or community which may endanger the health of either."

hazardous situation, it is his duty to so advise his commanding officer, and press for a technical evaluation, for appropriate safety precautions, or for enforcement of existing regulations. Atmospheric contaminants were a knotty problem on the early nuclear submarines; doctors serving in these boats contributed greatly to the successful resolution of the situation.⁸ Jet planes on carriers have brought serious auditory problems; tomorrow's more powerful sonars may bring more. The operational medical problems which may come out of today's intensive research on military applications of lasers and masers are as yet unknown.

The whole area of ships' food supplies and services are generally recognized as important by physicians, but very little practical material is taught in medical schools on the inspection of fresh stores, the potential sanitary hazards in ships' galleys, storerooms and refrigerators, soft drink dispensers and "gedunk" stands. Too often, the young medical officer feels that his corpsman is probably more competent to inspect than he, with the result that a series of inspection stereotypes grow up that are often meaningless from a preventive medicine point of view. The problem of food supplies is compounded when a ship takes locally procured materials aboard in a foreign port. Many a medical officer has been nonplussed upon receiving a call from the supply officer to check a batch of local food for acceptability.

To these routine problems are added the all important task of ensuring that the ship's medical department is ready for combat.

⁸ John H. Ebersole, "The New Dimensions of Submarine Medicine", New England Journal of Medicine, 262, 599-610 (Mar.24) 1960

Young doctors get a rude shock when they learn about the "closed door" policy during action. They get even ruder shocks when they contemplate loss of electric power, steam, and water. Add to this the natural reluctance to attempt major surgery, fostered through years of study in an institution where surgical training entailed a further long postgraduate education, and internes did little more than hold retractors at the operating table. Compound this by the likelihood that casualties will be multiple, and often simultaneous. It is hardly surprising that many young doctors, when they gage the magnitude of their responsibilities aboard ship; when they realize that help from more experienced personnel may not be available in an emergency, that weather may prevent helicopter evacuation, become discouraged and in some cases bitter, at their lack of preparation. Whether or not the modern medical school prepares the young doctor properly, there is no way around the hard fact that the young naval doctor must be prepared to do emergency surgery, and it may be major surgery.

Most doctors learn about tropical disease in medical school. The courses vary in quality; the mass of material the modern doctor must learn precludes detailed instruction on diseases that are unusual in the United States. Few if any schools adopt an "area" approach; and yet, the ship's medical officer may be required to advise the commanding officer at any time whether the men should be permitted to eat and drink ashore in a foreign port, swim in certain waters, whether overnight liberty should be granted in a known malarious area, etc. He may not be asked; he may have to take the initiative and advise restrictions. The modern Navy emphasizes mobility. The fact that we have landed Naval or Marine

personnel in Thailand, Vietnam, Korea, Taiwan, Cuba, Lebanon, British Honduras and at Agadir within recent memory should make the point. The unstable conditions in the Persian Gulf, India, the Congo, Iraq, Algeria, Borneo, and Laos lend additional emphasis to the fact that the young naval medical officer may encounter at first hand medical conditions rarely seen in the United States. By like token, Senior officers on Fleet staffs must be alert to warn their juniors of the likelihood of encountering specific exotic diseases.

The whole question of pesticides and rodenticides is another medical "grey" area.⁹ Ships still become infested occasionally with roaches, bedbugs, or other vermin. The medical officer ashore with a Marine landing party may confidently expect to be confronted with the problem. Guadalcanal abounded in malarial mosquitoes, Samoa had mosquito-transmitted filariasis, Guam had mosquito-transmitted dengue fever, Naples had louse-transmitted typhus, Okinawa had fleas, Goodenough Island had akamushi mites which transmitted scrub typhus. Modern chemical agents for control of these dangerous pests are highly toxic; many are related to our most potent chemical warfare agents. It is the medical officer's responsibility to "formulate plans and methods for the control of disease-bearing insects and insect pests."¹⁰ It is a rare medical school which teaches him how to safely employ pesticides, or to recognize the insidious symptoms of chronic poisoning with them.

⁹Capt. G. Donabedian, MC, USN, Staff Medical Officer to Commandant, USMC. (personal communication.)

¹⁰Manual Medical Dept. 22-31

Often the situation is local and acute. "Guidance" from above may be slow in arriving, or couched in terms too general to be of great assistance.

The paragraphs above refer chiefly to the general duty naval surgeon assigned to a surface ship. The heavy responsibilities of the doctor assigned to a nuclear submarine, or to a Heavy Attack Aircraft Squadron should need little comment, and the Navy prescribes a 6 month to one year course of special training for doctors assigned these duties. The doctor assigned to the Fleet Marine Force faces another galaxy of medical problems. He must thoroughly understand the organization of his unit, and the complexities of an amphibious operation, to provide the medical support which is expected of him. Many of the potential trouble spots in the world are in tropical or semi-tropical areas; he must know the preventive medicine safeguards most likely to be required in the area, and to constantly inveigh his commander to take appropriate cognizance of them. There will be times when he must be prepared to move his Aid Station by back-pack; he may operate for hour or even for days at a location which cannot be reached by jeep. He must be prepared to do initial combat surgery, must be sure that his corpsmen are constantly trained to furnish him maximum assistance. He must be prepared for high casualty rates among his corpsmen deployed forward, and to make the decision to replace--or not to replace--them from his Aid Station group. The medical safety of water points, the efficacy of field water treatment plants, the status of canteen sterilization discipline demand his frequent attention; an explosive epidemic of diarrhea could immobilize the battalion. He may be called on to defend his patients and Aid

Station--the niceties of the Geneva Conventions are not always followed. The possibility of nuclear attack, of mass casualties, of operations in a fallout zone, must form a constant backdrop for his activities. By whatever name it may be called, "shell shock" or "combat fatigue" is a real battlefield entity, and the doctor must decide whether to send the man back, or whether an hour's rest in the Aid Station area will fit him to rejoin his company. The doctor must husband his available supplies, and may all too often be faced with the grim decision of whether to furnish or withhold scarce blood or plasma from a serious casualty. The fortunes of war and the vagaries of weather make battlefield transportation uncertain. The doctor must have enough insight into the commander's problems to know when he may make unusual transportation requests for patient evacuation, and when the situation is such that he must prepare to hold his patients.

A particularly trying situation for a young medical officer is the Landing Operation itself. When one examines the medical aspects of a Marine Expeditionary Force (the Marine Division--Marine Aircraft Wing combat team) amphibious landing, the conclusion is inescapable that a high order of special training is required. The 25,000-30,000 man Division-Wing team--with the associated Naval Amphibious Force which lands it--is a highly complex organization, with medical units of the most varied types; beach teams, surgical teams, collecting and clearing units, helicopter evacuation units, etc. spread throughout the Landing Force and the Fleet. Hundreds of medical officers are required, and thousands of Corpsmen. Medical movement and patient evacuation occurs by air, ground and sea. This complex organization is the nation's

principal "force-in-being" for rapid reaction in local or limited war situations. Many emergency plans require elements of the team to move out in a matter of hours. Because DOD medical allowances do not permit BuMed to maintain the Marine team fully manned for combat, medical augmentation must be swift. At that time, it is too late to train medical officers for their role in the operation.¹¹

The above paragraphs should make it clear that naval or field medical service is a highly demanding form of practice, requiring special training and a large measure of individual initiative and adaptability on the part of the young doctor. Only some of the special medical problems have been discussed, and little has been indicated of the extent of knowledge required to deal with them intelligently. Biological and chemical warfare have not been mentioned, nor heat and cold stress, blast injury, flash burn, or survival at sea. The doctor with the operating forces could meet all of these problems tomorrow. And, in Navy parlance, he "has the wheel"--the responsibility is his, and the officers and men of his unit expect him to accept it. Their lives, literally, may be in his hands.

The Doctor as a Military Officer

There is another broad area for which medical school does not prepare the military surgeon, and which is of great importance to his professional effectiveness. This is his position as a military officer. For centuries, the naval surgeon was not considered a commissioned or "quarterdeck" officer; he occupied an ambiguous position in the

¹¹Capt. R. G. Witwer, MC, USM, Force Medical Officer, FMF Atlantic, expands on this theme in a personal communication.

wardroom, somewhat akin to the Purser. Commissioned rank was achieved in the 1700's in France, and in 1805 in the British Navy.¹² W.P.C. Barton, later to become the first Chief of the Bureau of Medicine & Surgery, pleaded for incorporation of the USN ship's surgeon into the officer corps as early as 1814,¹³ but this was not achieved until 1846.¹⁴ Not until 1871 did medical officers acquire a series of grades and titles equivalent to the rank structure in the line.¹⁵ Finally, in 1947, a hundred years after their recognition as officers, Medical Officers were granted the same ranks as officers of the line.¹⁶

Doctors now beginning active duty with the Operating Forces, in view of their age and medical training, bear the rank of Lieutenant-- a senior status among the young officers. Under our American system, they have generally had no previous military experience. Although commanders do not expect them to have the experience or military polish of the professional Line officer, they DO expect them to assume the military responsibilities of their rank. They are expected to observe the usages of shipboard etiquette, to know the relationships between

¹²D. Lloyd & J. Coulter, Medicine and the Navy 1200-1900, (Edinburgh: Livingstone, 1961), III

¹³W.P.C. Barton, Treatise on Marine Hospitals and the Medical Department of the Navy (1814) as quoted in F. L. Pleadwell, "William Paul Crillon Barton (1786-1856), Surgeon, United States Navy--A Pioneer in American Naval Medicine" reprinted from Annals of Medical History in The Military Surgeon, March 1920, p33

¹⁴Secretary of the Navy General Order of Aug. 31, 1846 (U.S. Naval Register 1847) Later confirmed by Congress.

¹⁵Office of the Surgeon General, USN, Desk Notes, 7 Sept. 1962, p1 (The ranks appear in USN Register, 1872.)

¹⁶Title 34, United States Code, 10A

staff and command, to exercise discipline over the men assigned to them, and to accomplish the official correspondence and reporting required of their Department. In the modern Navy, there simply isn't time for the Executive Officer, or some other senior line officer, to take the doctor under his wing and "show him the ropes". One exasperated Destroyer Captain recently wrote of medical officers, "If you are going to give him a Lieutenantcy, make him BE a Lieutenant, otherwise make him an Ensign and pay him more."¹⁷ The most junior line officers aboard receive a minimum of 18 weeks training, under our current programs, and much of this is devoted to their general responsibilities as officers. Chaplains and nurses each receive 8 weeks of military training. Our doctors get only 2-3 weeks. With this short training, it is difficult for the new doctor to realize he often has fiscal and custodial responsibility for his equipment and drugs, that he may be called at any time to sit on a Court Martial, that many of the papers he prepares have legal implications, that he must understand the combat mission of his ship, and must be acquainted with its Battle Organization. He must plan his medical emergency activities to support his ship's part in various Operations Plans. Perhaps the most difficult concept to absorb is the fact that he is not simply a medical specialist; he is responsible for the entire organization of medical care, i.e. the Medical Department, its men, equipment, facilities, organization, records and reports. (Some of this official load is removed when he is assigned as a staff officer to a group of ships.) Furthermore, this organization

¹⁷ Personal communication; reply to a questionnaire circulated at U.S. Naval War College, Jan. 1963.

must fit into the framework of the ship or the field unit. The failure of young medical officers to recognize and assume this responsibility was the complaint most often heard in a series of interviews conducted by the author with Line Officers recently returned from command of ships and Marine units.

A short example of the failure of some of our young medical officers to recognize and assume their responsibilities as part of the ship's organization may be cited. The great proliferation of nuclear weapons, and the increasingly large numbers of weapons systems to which they have been adapted, has led to ever-growing concern that a psychiatrically unbalanced person might gain access to a weapon. Although personnel in the program are very carefully selected, additional instructions regarding re-screening have recently been issued. The author interviewed two young doctors shortly after their return from sea duty. Their attitude, on receipt of the instructions, had been one of amused incredulity--both had ignored them, on the grounds that they "were not trained psychiatrists". What they had also ignored was the fact that they were the most competent individuals in this field aboard. They had also apparently decided, in their own minds, that the Instruction and the hazard were trivial. Apparently they had been detached before the commanding officer issued his specific directions for the evaluation of personnel. Many other young doctors in the fleet are of very material assistance in helping their Captains and Special Weapons Officers to decide whether certain individuals should be re-assigned to duties not involving access to the weapons; their professional advice is appreciated and respected.

CHAPTER III

NAVAL MEDICAL TRAINING--PAST AND PRESENT

The Early Days

The need for special training for service at sea or with the Fleet Marine Force appears obvious. It was recognized early on the Continent, and special schools for naval and military surgeons were established in France, Holland, Prussia and Russia in the 1700's. As in some other naval medical matters, England lagged behind the Continent, and it was not until 1800 that significant agitation for a naval and military medical school began.¹ The Royal Naval Medical School was established 80 years later at the Haslar (Naval) Hospital, Gosport, near Portsmouth, England.² The School now enjoys its own building, and continues to prepare doctors for service with the Royal Navy.

In the U.S. Navy, the energetic W.P.C. Barton is said to have advocated such courses as early as 1809.³ He certainly vigorously championed them in 1814,⁴ admitting that he had been influenced by a book written in 1806 by the English Naval Surgeon William Turnbull.⁵ Barton may well have met Turnbull; in 1810, one year after entering the Navy, he visited Europe while serving in the frigate "Essex".

¹Lloyd & Coulter, III, p29

²H. L. Pugh, "The Naval Medical School in 1946", U.S. Naval Medical Bulletin, 46,8 (Aug. 1946) p1159

³Ibid

⁴Barton, Treatise on Marine Hospitals, Sec.III, from Pleadwell, p40

⁵Wm. Turnbull, The Naval Surgeon, comprising the Entire Duties of Professional Men at Sea, 1806 as ref. in Lloyd & Coulter, III, p34

Characteristically, he visited as many Naval and civil hospitals as possible, keeping detailed notes on their construction, organization and administration, as well as on the practice of Naval medicine in both England and France. In 1811, only two years after Barton had entered the Navy, the Secretary of the Navy asked him to prepare, on the basis of his European observations, recommendations for the organization of U.S. Naval Hospitals, for transmission to Congress.

The first course for neophyte naval surgeons was established by Dr. Thomas Harris at Philadelphia in 1822. Newly appointed doctors were exposed to a curriculum consisting of naval hygiene, customs and usage of the naval service, and military surgery.⁶ The program was maintained for a number of years. It was later revived at the Naval Laboratory in New York, then abandoned during the Civil War. In 1872, Surgeon General Palmer, in his annual report to the Secretary of the Navy stated, "Finally, I have to implore for the sake of our sick and wounded in line of duty, some increased facilities for purely naval education in our medical officers."⁷ In 1873 and 1874, Surgeon General Beale echoed the appeal. By 1878, the Secretary of the Navy directed that such training be given, and Surgeon Grier ordered a class of six new officers to USN Hospital, New York, for instruction in Naval Hygiene, Naval Medical Routine, Microscopy, Examination of Recruits,

⁶Roddis, p232, p208

⁷Report of the Secretary of the Navy 1872 p.105

and Laboratory instruction. He directed that they be encouraged to "attend the cliniques of the City hospitals, and to improve their knowledge of anatomy by making dissections and performing operations on the Cadaver".⁸ The curriculum extended over a two year period! In 1883, Surgeon General Wales established a Museum of Naval Hygiene in Washington; in 1894, Surgeon General Tryon instituted a center for instruction, which included the Museum and the Surgeon General's library on the present site of the Bureau of Medicine & Surgery. This center was formally designated the Naval Medical School in 1902. It functioned at that site for 40 years. In 1942, it was moved to the National Naval Medical Center at Bethesda.

During the period 1902-1940, the U.S. Naval Medical School developed into one of the world's great centers of Naval Medicine. Mahan's writings, and Roosevelt's vigorous service policies led to the establishment of the United States as a first class Naval Power. The Spanish-American War, the Panama Canal, unrest in the Caribbean, South America, and the Philippines, all stimulated the interest of Naval and military authorities in tropical medicine. Excellent collections of material were built up; the school became the Navy's prime center of medical science. The courses offered at the Naval Medical School during the period 1902-1930 had great influence on the development of tropical disease instruction in the civil medical schools. In this respect the school played a role similar to the "Ecole d'Application" of the French Colonial Army at Marseilles.

⁸W. Grier, in letter to Med. Director S.F. Coates, USN, Naval Hospital, New York, March 18, 1878. (Facsimile copy kindly furnished by Capt. M. W. Arnold, MC, USN (Ret.) Director, Publications Division, BuMed.

Curricula from the late 1930's show that the Medical School then offered a 7-8 month course consisting of a variety of naval medical subjects (including aviation, field and submarine material) as well as postgraduate clinical instruction.^{9,10} A corps of trained medical officers was developed who served the country well; graduates of these courses are still rendering distinguished service to the Navy and its Medical Corps.

World War II and After--The Decline in Operational Training

During the years of World War II, the "Basic" course was reduced to 5 months for medical officers; and relatively few were able to attend. Much of the clinical material was dropped; major emphasis was placed on tropical disease, medical entomology and preventive medicine. Medical officers assigned to aviation, submarine, or Fleet Marine Force took additional work in separate schools established for these specialties. Over 2,000 men (enlisted) were trained for special duty in the fields of preventive medicine and laboratory work at the Medical School.

Since World War II, the training of U.S. medical officers for general duty afloat and with the Fleet Marine Force has been drastically curtailed. The long courses at the Naval Medical School were abandoned in 1954. Field Medical School courses have been reduced; the schools are no longer commanded by Medical Officers. This has been a

⁹Naval Medical School, Prospectus of the 36th Annual Course for Medical Officers (Washington: 1937)

¹⁰Ibid. 37th Annual Course, 1938.

peculiarly U.S. phenomenon. After the war, the foreign navies, such as France, Britain, Canada, Germany, Denmark and Sweden re-established their relatively long periods of indoctrination into military life and the problems of naval medicine; France and Sweden have recently revised them upwards.

Reasons for the Trend--The Grim Years

Why has training for medical service in the Operating Forces of the Navy and the Marine Corps been allowed to decline so radically? There are two principal reasons, and they are inter-related. (1) There is an acute shortage of medical manpower, (2) Most new doctors do not enter the Navy as career officers, but only as "short timers". The reasons for these two phenomena are many: the post-war revulsion toward all aspects of military life, the deepseated distrust in America of the professional military "caste", the overzealous assumption of management direction by civilian elements of the Department of Defense, the emphasis on dependent medical care benefits in service recruiting and pay legislation. These and other factors have contributed to our present difficulties.

The shambles of demobilization after World War II are remembered vividly by many. "Get the boys home" became a rallying call that could not be brooked, despite continuing U.S. commitments. Absolute release deadlines were set for Reserve Medical Officers, despite operational requirements. The author vividly remembers a period of about 10 days when he and one other Regular officer were the only doctors available for thousands of Marines widely scattered through North China. Urgent appeals of the responsible commanders for permission to hold Reserve

doctors until reliefs--already en route--arrived, had been refused.

Not only Reserve medical officers, but many Regular officers, tired of war, attracted by the prospect of remunerative practices and a more stable family life, departed the Navy in droves. Many physicians, trained at government expense through ASTP and V12 programs, were released from their reserve obligations. All in all, the service medical departments were faced with virtual extinction. A great many study groups, both within and without the services, attempted to resolve the medical manpower problem, and to stimulate medical recruiting. The history of this period and these activities is covered in detail in the references cited below.^{11,12,13}

Charges of "military waste of manpower" and "civilian meddling" were heard, as tempers became increasingly short. The Navy Surgeon General was sufficiently moved to publicly impugn the patriotism of the medical profession; he received the warm approval and congratulations of the President.¹⁴

Several steps were inaugurated to stem the tide. Greatly expanded Residency Training in the various medical specialties was introduced into the Naval Hospital system in 1945 in an effort to induce officers to remain in service. These courses received formal approval by the

¹¹History of the Medical Department 1945-1955.

¹²H. L. Pugh, Navy Surgeon (Philadelphia: Lippincott, 1959)

¹³H. L. Pugh, "Doctors For the Armed Forces", U.S. Naval Institute Proceedings 80 1 (Jan 1954) pp33-45

¹⁴Pugh, Navy Surgeon p294

various AMA Specialty Certification Boards. In 1947 a special salary increase was voted medical officers. In 1950 the situation became so acute a Doctors' Draft Law was enacted to meet the needs of the Korean crisis. This has been repeatedly extended or re-enacted. In 1953, the Department of Defense accepted a recommendation of the "Rusk Committee" (the Presidentially appointed Health Resources Advisory Committee of the Office of Defense Mobilization) and halved the statutory allowance of Navy doctors. (The overall service allowance was even lower.) Medical salaries were again increased, and promotions were accelerated by granting "constructive" service credit for the years spent in medical school and private practice. Although acceptance of the Rusk Committee recommendation eased the manpower problem, through the device of drastically cutting the allowance, the immediate and long term effect was a body blow to Naval medicine. When promulgated, the Navy had about 4,000 doctors; the new manning ratio forced the Navy to reduce its strength by over 1,000 medical officers--a 25% reduction. To meet this acute reduction in manpower, all billets were carefully scrutinized; medical officers were removed from small ships, allowances on large ships were reduced, doctors attached to aircraft squadrons and ships in port were given additional clinical duties at local hospitals and dispensaries, and training billets were reduced. The Medical School course was abandoned. These and other manpower economies made it "possible to give reasonably complete medical support to the personnel of the Navy and other Armed Forces and to maintain essential if not full medical care for military dependents, but at the expense of seriously decreased medical readiness. This was accepted only on a calculated risk

basis, in the hope of relief in the form of an increased allowance of medical officers, and passage by Congress of an adequate Dependents' Care Bill." ¹⁵ (Emphasis added.) The allowances originally set by DOD for the Navy (3.26 MO's/1,000 men) proved untenable in practice, and partial, although as yet insufficient relief has gradually been granted. An "adequate" Dependents' Care Bill has not yet been passed; and the medical care load of this group and of retired personnel and their dependents becomes heavier each year. Neither naval medical training nor medical readiness have recovered from this essentially civilian determination of Naval medical manpower requirements.

It should not be thought that the Navy accepted this curtailment in medical strength, nor the decrease in medical readiness thereby engendered, without concern. Vigorous reclamas were made, but without success.

Faced with an inadequate allowance of medical officers, most of whom did not plan to make the Navy a career, the Bureau of Medicine & Surgery adopted the policy of sending as many of the freshly-recruited doctors as possible to certain large Naval Hospitals for a short Indoctrination Course. An extensive syllabus was issued, with a large volume of carefully prepared supporting material. ¹⁶ The principal weakness of the syllabus was its scope. It was prepared by officers acutely aware of

¹⁵History of the Medical Department 1945-1955, p.190

¹⁶The Bureau of Medicine & Surgery, USN, Curriculum for the Naval Orientation and Indoctrination of Medical Corps Officers Reporting For Their First Active Duty as Medical Officers. (Washington: BuMed)

4 June, 1956.

the many things a Naval Medical Officer should know. They attempted the impossible:--to cram all of this material into a two-week course. To add to the difficulty, many harried hospital commanders simply could not afford to assign experienced senior officers very time-consuming responsibilities in connection with this course; these officers were needed for patient care. Many of the trainees felt that insufficient attention was devoted to them; others resented occasional lectures by administrative personnel and the rare ones by senior enlisted personnel. The program gradually declined, and it was not unusual to find doctors in the Service who had not had the benefit of any indoctrination. An attempt was made to send all doctors detailed to FMF to a shortened course at Field Medical Service School. This program also could not be rigorously pursued, and numbers of doctors have appeared overseas without previous Field Medical Training.¹⁷

Easing Back to Base Course

At present, the climate is beginning to mellow. Personnel shortages are still acute, but the various incentive programs have improved the composition of the Corps. Steps have been taken to improve operational training. Weekly seminars in Tropical Medicine have been instituted at Bureau request in a number of hospitals. Naval internes receive instruction throughout their internship on naval medical matters. Upon graduation, the internes who remain in service (and the great majority do) are initially ordered to operations or military specialty training, with only rare exceptions. "In 1962, for the first time, through the

¹⁷Personal communication, The Force Medical Officer, FMF Pacific

combined efforts of the Chief of Naval Personnel, The Chief of the Bureau of Medicine & Surgery, The Commanding Officer, U.S. Naval Officer Candidate School, Newport; The Commanding Officer, U.S. Naval Hospital, Newport; and the Staff of the Commander, Cruiser Destroyer Force, U.S. Atlantic Fleet, a formal indoctrination course was established at UCS, Newport, R.I. The curriculum was designed to acquaint newly-reporting officers with the responsibilities of a naval medical officer, and to furnish indoctrination into the military aspects of Navy life. There were 44 officers in attendance at the 3-weeks course." [Others attended for only 2 weeks.]... "It is planned that next year this training at Newport will be expanded to include more indoctrin-
ees and, it is hoped that a similar course can be established on the West Coast." ¹⁸

These steps are modest -- but they represent an important advance. It is now time to consider easing the helm over a few more degrees, and hastening our return to a course which ensures that our young naval officers will be as well prepared for duty at sea as for duty in our Naval Hospitals.

¹⁸ M. A. Arnold, Editorial comment on Fitzhugh Lee, "Doctors"
CNATRA DOPE as reprinted in USN Medical News Letter 40, 8
(19 Oct. 1962), p. 29-30

CHAPTER IV

CURRENT MEDICAL OFFICER TRAINING PROGRAMS

IN OTHER NAVIES

The author has been privileged to visit several European Naval Medical Training Centers, and to discuss the programs with staff members at length. The following notes are presented to indicate medical officer personnel trends and training policies in the Navies of some of our principal allies.

Canada¹

Canada's military services have united their Medical Corps. As a result, a naval medical officer, when ashore, may be detailed to clinical duty at a Navy, Air Force or Army facility. The Naval Medical Service is completely volunteer; doctors from other Commonwealth countries may sign on, and some do, attracted by the high Canadian pay scales. The present training program consists of a six-week Naval Indoctrination Course (taken with newly-entering officers of other specialties), and a four-week Military Medicine Course. The minimum tour is 5 years; the doctor may anticipate this will include one year of postgraduate clinical specialty training.

¹Interview with Surgeon Lieutenant M. Davis, RCN, Squadron Medical Officer in HMCS St. Croix, (Newport, R.I. 16 Feb. 1963)

Denmark²

Denmark has obligatory military service, and hence no problem of personnel shortages. Present total service for medical officers is 16 months, including training periods. Naval medical officer training lasts 27 weeks, and is given in the following three increments:

1. Basic Naval Recruit training--10 weeks (during early academic career)
2. Joint military medical training--12 weeks (following internship)
3. Naval Officer training--5 weeks (at Royal Danish Naval Academy)

France^{3,4}

France has obligatory military service, but her Regular Naval Officer program is so strong that medical students who delay their obligatory two year military service until completion of medical school are bonus personnel as far as the Navy is concerned.

French medical curricula are prescribed by the government, and include a one year pre-medical course. This course is offered by various universities, and also by the Navy at three locations. Students who attend the Navy courses may compete for a place in the Navy Medical Program.

²J. H. Stover, Jr. Notes on the Danish Armed Forces Medical Services, Office of Naval Research Technical Report ONRL-64-60 (London: American Embassy, 1960)

³Raymond DeBenedetti, La Médecine Militaire, (Paris: Presses Universitaires de France, 1961) pp. 113-115

⁴Interview with Méd. Général de 1^{ere} Classe de la Marine Le Breton, Surgeon General of the French Navy (Newport, R.I. Oct. 26, 1962) and subsequent correspondence with him.

Successful candidates then join the Navy, and attend the (civilian) Faculté de Médecine at Bordeaux, as uniformed Naval Candidate Officers. During this period they reside at the Naval Medical School, which consists of student dormitories, lecture and demonstration rooms, library, etc. and are under Naval discipline. A tutorial staff supplements the instruction received in the civil medical school; as a result of this special tutoring, a higher percentage of the Naval students than of the civilian students achieve selection for the various "honors" paths of French medical education. After completing the medical course (which includes clinical material equivalent to U.S. internship) the student participates in an around-the-world cadet training cruise with his contemporaries from the Naval Academy and the other naval specialty schools (engineers, ordnance officers, etc.) He then takes a course of Applied Naval Medicine at the Naval medical center in Toulon. This course has just been provisionally revised; in the future, students will go from Bordeaux to Toulon for an initial 6 month applied course, then go to sea on a new cadet training ship, now building, for an as yet undetermined period.⁵

Medical students not planning a naval career may serve their obligatory military duty either prior to, or early in medical school years as corporals; at a later period as "candidate doctors" (médecins aspirants); or after licensure, as medical officers. They receive 6 weeks military medical training (tri-service) and are not usually employed in fleet billets.

⁵Ministère des Armées, Direction centrale du Service de Santé des Armées, Instruction Provisoire no. 1/M/DCSSA "Portant Reorganisation De L'Ecole D'Application Des Médecins et Pharmaciens-chimistes De La Marine"

Germany⁶

The German Navy was re-established in 1955. There is obligatory military service (one year), but as this may not be deferred until the end of medical school, it does not bring a supply of reserve medical officers to the Service. The minimum tour in the Medical Corps is four years; the Navy Medical Department is at about two-thirds desired strength, and recruiting is being encouraged by a variety of schemes, including support during medical school. Training requirements vary, depending on previous service, and various other options. The pattern for students now in medical school, who desire to enter the Navy as Medical Officers is:

- 12 weeks--Basic Recruit training (early in academic career,
with year group)
- 6 weeks--First Aid training with Brigade Medical Co.
- 6 weeks--Field Service with Medical Unit
- 8 weeks--Petty Officer course, Armed Forces School of Military
Medicine
- 4 weeks--Return to previous field unit
- 12 weeks--Reserve Officer Candidate training, Naval Academy
- 12 weeks--Advanced Officer Candidate Medical Training course,
Armed Forces School of Military Medicine

These courses are offered during vacation periods at various points in the medical school program. There are various choices, but the total training period is either 15 or 18 months. Of this period, 12 months is counted as the "obligatory military service" period. In the 15-month plan six months are spent on military indoctrination, two and one-half months in military medical field service, and six and one-half months on military medical indoctrination.

⁶ Stover and Seemann, pp. 30, 31

Great Britain⁷

Obligatory military service has been abandoned. The Navy Medical Corps is now about 15% below strength. The minimum contract is for three years, but may be voluntarily extended to five; after this point, the doctor must join the Permanent Service with retirement options at age 45-50-55 (depending on rank). Present salary scales are decidedly above the Line. A medical Lieutenant earns as much as some Line Commanders. A sizeable bonus (about \$4500 tax free) is paid on separation at three years. If the doctor chooses to extend for two more years, the separation bonus is doubled (about \$9,000 tax free). The doctor who enters the Permanent service at the 5 year point only receives \$4500, taxable. Starting in 1962, the Navy began a system of support for medical students in return for obligated service. The present scheme gives them a commission for the last three years of medical school, with an annual salary of about \$3,000 out of which the student pays all fees. He is obligated to serve a Naval internship plus an additional five years. Whether he will then receive a separation bonus is unknown.

Present Training in Great Britain

Naval training--4 weeks (Portsmouth Barracks)

Naval Medicine--1 week underwater medicine

1 week nuclear medicine

1 week tropical medicine

1-3 weeks miscellaneous,

including emergency dentistry

at the
Naval Medical School
Gosport

For duty with Marines, add 6-9 weeks Commando course; 1 week Field Hygiene at the Army School of Health.

Training is followed by assignment to fleet or Marine commando unit.

⁷Interview w. Surg. Lt. Wilson, RN, Squadron Surg. in HMS Lowestoft 'Newport, R.I. 19 Mar. 1963); several visits to RN Medical School, Gosport, Hants., England.

Norway⁸

There is obligatory military service of 16 months. Training for naval medical officers consists of:

- 8 weeks--Naval boot camp
- 8 weeks--Cadet Training Ship (as deck rates)
- 8 weeks--Officer and Military Medical training at Royal Norwegian Naval Academy. Training includes diving and ABC.

The first 8 week period is taken during the first summer of medical training, the second during the second summer. The third course is taken after the fifth year of medical school.

Sweden^{9,10}

Sweden also has obligatory military service (18 months). A detailed study of defense medical requirements has recently been completed, and various changes in duty periods and training are now in progress. Implementation requires a rather complicated phasing scheme.

Present and proposed courses for Naval medical officers are:

	Present	Proposed
Naval indoctrination. . . .	120 days	85 + 75 = 160 days
Military Medicine	60 days	45 days
	(6 months)	(7 months)

Total military service is at present 1½ years. It is proposed to reduce it to about 1 year, for doctors, but with subsequent obligatory refresher courses or short tours. Medical students now receive a 60-hour course in War Medicine as part of their regular curriculum.

⁸Stover, ONRL Tech Report 55-60, p.2

⁹Statens offentliga utredningar 1961:63 Läkaren I TotalFörsvaret (Stockholm: Kihlströms Tryckeri, 1961)

¹⁰Interviews with Cdr. E. Schildt, MC, RSWN, at various times and various places.

Recapitulation of Naval Medical Officer Training

COUNTRY	<u>Training Given</u>			Total	Minimum MO Tour (inc. training)
	Military	Military	Medical		
Canada	6 weeks +	4 weeks	=	10 weeks	5 years
Denmark	15 weeks +	12 weeks	=	27 weeks	1½ years
France	Reserve	?	?	6 weeks	2 years
	Regular	about 6-8 mos. +	about 1 year	= about 85 weeks	Career
Germany	24 weeks +	36-52 weeks	=	65-78 weeks	5 years (1 plus 4)
Great Britain	4 weeks +	4-6 weeks	=	8-10 weeks	3 years
	(for Marines add	6-9 weeks +	1 week	= add. 7-10 weeks	" "
Norway	18 weeks +	6 weeks	=	24 weeks	1½ years
Sweden	Now	16 weeks +	8 weeks	= 24 weeks	1½ years
	Proposed	23½ weeks +	6½ weeks	= 30 weeks	1 year
UNITED STATES	combined;-total			= 3 weeks	2 years

CHAPTER V

APPRAISAL AND A PROPOSAL

The United States Navy offers at present a minimal indoctrination course for its young doctors. The course is far shorter than those offered by other Navies, is shorter than the indoctrination offered other specialist officers in our own Navy, and is shorter than the medical courses previously given in the U.S. Navy. Has this policy had any noticeably deleterious effect? Does it jeopardize our medical readiness?

So far as our hospital and dispensary services are concerned, there has probably been little serious effect. These facilities are closely enough akin to civilian medical practice that the new doctor need know relatively little about the Navy to perform his duties adequately. The effect on the operating forces, however, and on that small group of medical officers who serve them directly, has been substantial. This view is held by many senior medical officers and officers of the line. A major Fleet Surgeon, when solicited for comment on the situation, wrote "Our young doctors are woefully lacking in the understanding of operational or military medicine. This certainly reflects adversely on our Corps."¹ A Force Surgeon, commenting on a recent Marine deployment, stated "... (area) ... worked out pretty well in general. Candidly, however, not without special assistance, which I felt was necessary, although the unit did not request it. ... As you might suspect, this was a preventive medicine officer, a provision which proved essential.

¹ Personal communication

"It was simply that I did not have confidence in the medical officers with the unit to recognize the importance of preventive medicine in such a situation, to know what preventive measures were indicated, or to know how to perform them properly and adequately. ... I do not speak now of esoterica, I refer...to the common garden variety of preventive medicine which every medical officer needs to know. ..."² Both of these officers, and two-thirds of the surface and FMF officers in the previously mentioned Naval War College survey, were concerned about their doctor's shortcomings as a military doctor.

With only two or three weeks of indoctrination, few of our young doctors achieve much insight into their role as Naval Officers. It is difficult to achieve even the external marks. The importance of the role has been previously emphasized. It is a major disservice both to the doctors, and to the services, by failing to instill in the doctors an appreciation of the fundamental ideas, the motivating forces, and basic responsibilities of the Naval and Marine communities. We cannot readily expect our newly-entered doctors to become masters of the field unless we tell them what it is all about. We must clearly show them the role of the force they are about to join; and show them convincingly that the mission is difficult, that it is being conducted intelligently, with a very high order of technical competence--and for that matter with considerable quiet heroism. Doctors are a select and highly intelligent group; we would do well to acquaint them in more than general terms with the Navy's job.

² Personal communication.

There are those who argue that all this can be learned "on the job". It can be, and many young doctors do gain an appreciation for their ship or unit, assume their responsibilities, and do an outstanding job. Unfortunately, many others do not; they enter the unit on the wrong foot, and remain "strangers in an alien land", permanently out of step. One can hardly blame the commander, with war plans in his safe, acutely aware of his enemies' competence and his own vulnerability, for being annoyed with a lackadaisical, disinterested, short-time doctor. Even for the young doctor who displays some interest, the "osmosis" process is a slow one. It takes a long time to learn by trial and error, button-holing likely officers, or plowing through highly technical organization bills, operations orders, and Registered Publications.

Our doctors remain aboard or in the field only for about a year. We should expend more effort in preparing them to work effectively during this period. This effort would materially benefit the fleet and the Fleet Marine Force. Our present training schedule is simply inadequate to afford either the motivation or the technical competence that our operating forces have the right to expect of their doctors. (We should also bear in mind the fact that even though many of these young doctors will leave the Service, they form our second line of defense in event of emergency.)

What can be done about it? Our Medical Department is caught in a cruel vise by the personnel allowances. There is no "fat". The Department's task is to provide the best overall medical support to the Navy that is possible with the resources on hand. The author would suggest a slight shift in our officer distribution policy. We have been devoting a great deal of effort in the last decade to the shore

establishment, to training doctors in clinical specialties, and to attempting to cope with the dependent care problem. All of this has been necessary and fruits of this policy are now apparent. The Regular Navy base of the Corps has been substantially improved. Even though many of these officers may not be considered career officers, they remain in the Navy for an appreciable length of time. Our Navy Residency Program, and the astute Berry Plan, provide our hospitals with well-balanced staffs of medical specialists. We are not able to provide the type care we would like to afford our dependents. Navy people are well aware of the long wait for non-emergency appointments, the crowded clinics, the non-availability of doctors for housecalls. The author suggests that despite these latter shortfalls, we do owe more attention to our operating forces.

We should attempt now to provide officers as well qualified for duty at sea and in the FMF as we do for our hospital services. This qualification must include motivation.

It is believed a course of 8-10 weeks in length, followed by 2-3 weeks of practical instruction at Field Medical Service School or at a fleet operating base such as Newport, Norfolk, San Francisco or San Diego would provide such motivation and a reasonably good acquaintance with the professional and administrative aspects of Naval medicine. Such a course would approximate the Canadian and British schedules, but would be considerably less comprehensive than the French, German, and Scandinavian courses. In the next chapter, the impact of this suggested course on the personnel situation will be analyzed, and a course will be outlined.

CHAPTER VI

THE MEDICAL MANPOWER PROBLEM

Any proposal to remove officers or men from their assigned Naval duties for training purposes, immediately runs head-on into the problem of personnel shortages. This problem is not confined to the Medical Department by any means, and it is acute. As of 30 June, 1962, there were 3,490 doctors in the Navy--the Medical Department was at 99% of its authorized strength of 3,525. There are about 1,719 doctors in hospital billets, and 1,188 in non-hospital shore billets. (The great majority of these are dispensary billets of one type or another.) About 583 are with the operating forces, or one doctor afloat for every five ashore. The annual turnover of Medical Officers is a staggering 700--one doctor in five has been in the Navy less than a year.

The root of the personnel problem in the Medical Department lies in the method by which the total Medical Officer personnel allowance is computed. By law, the authorized strength of the Navy Medical Corps is "65/100 of 1%" of the active duty personnel of the Navy and Marine Corps --i.e. 6.5 doctors per 1,000 men.¹ The allowance was authorized by Congress about 50 years ago (1914); it was reaffirmed in 1947.² Formerly, yearly ceilings were jointly determined by CNO, BuPers and BuMed on the basis of detailed planning and personnel requirement projections. One of the highest staffing ratios ever actually attained was 6.1/1,000.³

¹Title 10, U.S. Code, 5404 (b)

²Public Law 381, 80th U.S. Congress

³Pugh, Naval Institute Proceedings, 1954

As previously noted, implementation of the Rusk Committee's recommendation drastically reduced the allowance to 3.26/1,000 (for the Navy). The allowance has gradually been increased by the Department of Defense. According to Dr. F.B. Berry, Deputy Assistant Secretary of Defense (Health and Medical)⁴ the services now have 4.0/1,000 with the ratio showing a seasonal rise to somewhat over 4/1,000 in the fall. The overall ratio for the civil population in 1961 was 1.33/1,000.⁵ At first blush, it would appear that the services have about 3 times as many doctors proportionately as the civil population. This, it would seem, should be adequate to cope with the recognized coverage problems of small, physically isolated units, such as ships, and also special military training requirements. The fallacy is that the ratio is computed on the basis of military strength, and not on the total population eligible for care by service doctors. Congressional military pay hearings, legislation, and recruiting programs all cite the availability of dependent medical care as a military "fringe benefit" or bonus. The actual authorizing legislation for dependent care⁶ is permissive rather than absolute in its entitlement. The care of retired personnel and their dependents^{7,8} is also permissive. This is a work load which is rapidly increasing; a recent Bullied staff study indicates the load will quadruple by 1985.

⁴ Personal communication

⁵ "Medicine" 1962 Britannica Book of the Year (Chicago: 1962)p.426

⁶ Title 10, U.S. Code, 1076(a)

^{7 and 8} Title 10, U.S. Code, 1074(b) and 1076(b)

The same study indicates that the dependent, retired, and retired dependent Navy population is nearly double the active duty population. There are 850,000 active duty personnel vs. 1,417,000 other eligibles. For many reasons, the Navy very strongly desires to continue treating these patients. Our apparently generous allowance of 3 times as many doctors as the civil populace, on this eligible population basis, takes a rapid nosedive: instead of 4.0 doctors per 1,000 men, we really have only 1.3 per 1,000 eligibles--or exactly the same ratio as in the general population. We cannot support the special requirements of Navy medicine at this manning level. Something has to give.

The above-mentioned BuMed internal staff study, based on a very careful and realistic review of medical manning levels and work loads at each facility, concluded that in order to conduct a reasonable, "no frills" program of medical care including dependents and retired personnel, the Navy requires 191 additional doctors at this time. No allowance for doctors in a training status has been incorporated in these figures. The report has been presented at higher levels; action toward relief has been deferred pending formulation of Department of Defense policy on the future of medical care to retired personnel and their dependents. The fact that medical school applications have sharply declined in the past few years will probably increase DOD reluctance to granting additional doctors to the services. The Navy now absorbs about 10% of each year's medical school graduating class. The number of persons eligible for care will increase inexorably, and steeply. The situation can only become worse.

These are the hard facts of the situation. In view of them, can a training program in military medicine be justified? The answer must be

a resolute "YES". The Navy has a military mission; the National Security Act requires it "To organize, train and equip Naval and Marine forces for the conduct of prompt and sustained combat operations at sea...". This is our basic commandment; it is what the Nation expects from its Navy. The Navy Medical Department exists primarily to support the Navy in this mission. In the earlier portion of this paper, it has been demonstrated that a medical education, sui generis, does NOT adequately equip a doctor to meet the medical requirements of the military environment. The question that needs to be answered is, "What training program must we support to ensure an adequate posture of medical readiness in the Navy?" The personnel squeeze dictates that it be the minimum adequate program.

How Many Doctors Should We Train?⁷

The doctors whose work is most unlike civil care are the doctors aboard our ships and with the Fleet Marine Force. These same doctors are the ones most likely to face military action. For these reasons, they are clearly the officers most in need of special operational training. Additionally, there are doctors in our hospitals, earmarked to augment Fleet Marine Forces and Amphibious Forces in the event of emergency deployments. These too must be trained.

⁷Statistics used in this section were kindly furnished by the Personnel and Professional Operations Division of the Bureau of Medicine & Surgery. They are all current, and in general reflect the status about January, 1962. Monthly variations are to be expected. Association with, or approval of, the author's views, is not implied.

Of the 583 medical officers detailed to the Operating Forces, 498 are Lieutenants. In considering the minimal training requirement, let us assume that the 85 more senior officers have acquired special operational knowledge or experience, and may be omitted from the training program.⁸ Of the 498 Lieutenants, let us further assume that those detailed to fill military specialty billets, such as Aviation and Submarine medicine, Underwater Demolition Teams, etc. will receive appropriate indoctrination in their special long courses and may be omitted from consideration here. A billet by billet check reveals that some 304 Lieutenant "general practice" assignments are made to the Operating Forces annually. These are the hard core who need special training in military medicine; they comprise 8.5% of the total strength of the Medical Corps. (Augmentation personnel in Naval Hospitals are to be covered by special training schedules now in preparation.)

There are three principal sources of these officers; the annual graduating class of Naval Internes, the doctors who volunteer for two or more years, and those doctors called up under the "Doctors Draft" law for two years. Almost all of the doctors enter the Navy during July and August; there are strong arguments for not forcing their entry at other dates.

Is it feasible to annually train 300 doctors for 12 weeks? Very large classes are undesirable from many viewpoints, although numerous colleges and universities find them necessary. The entire group COULD be taught simultaneously, provided an auditorium were

⁸ This assumption is not necessarily valid, according to the Force Surgeon, FMF Pacific (personal communication), and Marine officers at U.S. Naval War College. The latter advocate a short course at Marine Schools Command, Quantico, for senior Naval officers ordered to FMF.

available, and a sufficient supporting staff for some work in smaller groups were provided. An East Coast and a West Coast facility would halve the class size and save travel money, but would necessitate some increase in staff. Such a plan would remove 8.5% of the Navy's medical strength from clinical duties during the training period. This would be a severe, and probably unmanageable strain on the system, even for the short period of 12 weeks.

If three training courses were offered annually, as in Aviation Medicine, the classes would be smaller, and fewer people would be "off the line". Some reduction in training staff might be possible, but the detailing problem would become more complicated. Three training cycles, at either one or two locations, would mean classes of only 100 or 50 students respectively. Such classes would be pedagogically much more desirable, and only about one doctor in thirty-five would be "off the line" at the periods of maximum stress.

Can the Detailing Problem Be Met?

A detailing model has been constructed to assess the feasibility and manpower impact of such a training cycle. The model is based on the following simplifying assumptions, which do not vitiate the general argument:

1. Priority is given to maintaining full allowances at sea and meeting RAD dates.
2. The number of "general practice" Lieutenants at sea (and FMF) is just 300.
3. There are 300 Lieutenants ashore who are "opposite numbers" to those at sea, and only these are considered in the analysis, although it is recognized that a larger pool actually exists ashore.
4. Sea/Shore assignments for the Lieutenants in 2 and 3 above, are exactly 12 months in duration (i.e. authorized delay in reporting, proceed time, travel time and "on or about" detachment date discretionary periods have been omitted).

Detailing Feasibility - Sheet 1

15 Jul '64

1 Oct '64

1 Jan '65

1 Apr '65

15 Jul '65

1 Oct

AFLOAT

A 100 Lts RAD '65 (extend 3 mo.)

B₁ 50 Lts RAD '65 (extend etc for 6 mo.)

B₂ 50 Lts RAD '64

C 100 Lts RAD '64

New Entries '64

1 100 Lts RAD '66

2 100 Lts RAD '66

3 100 Lts RAD '66

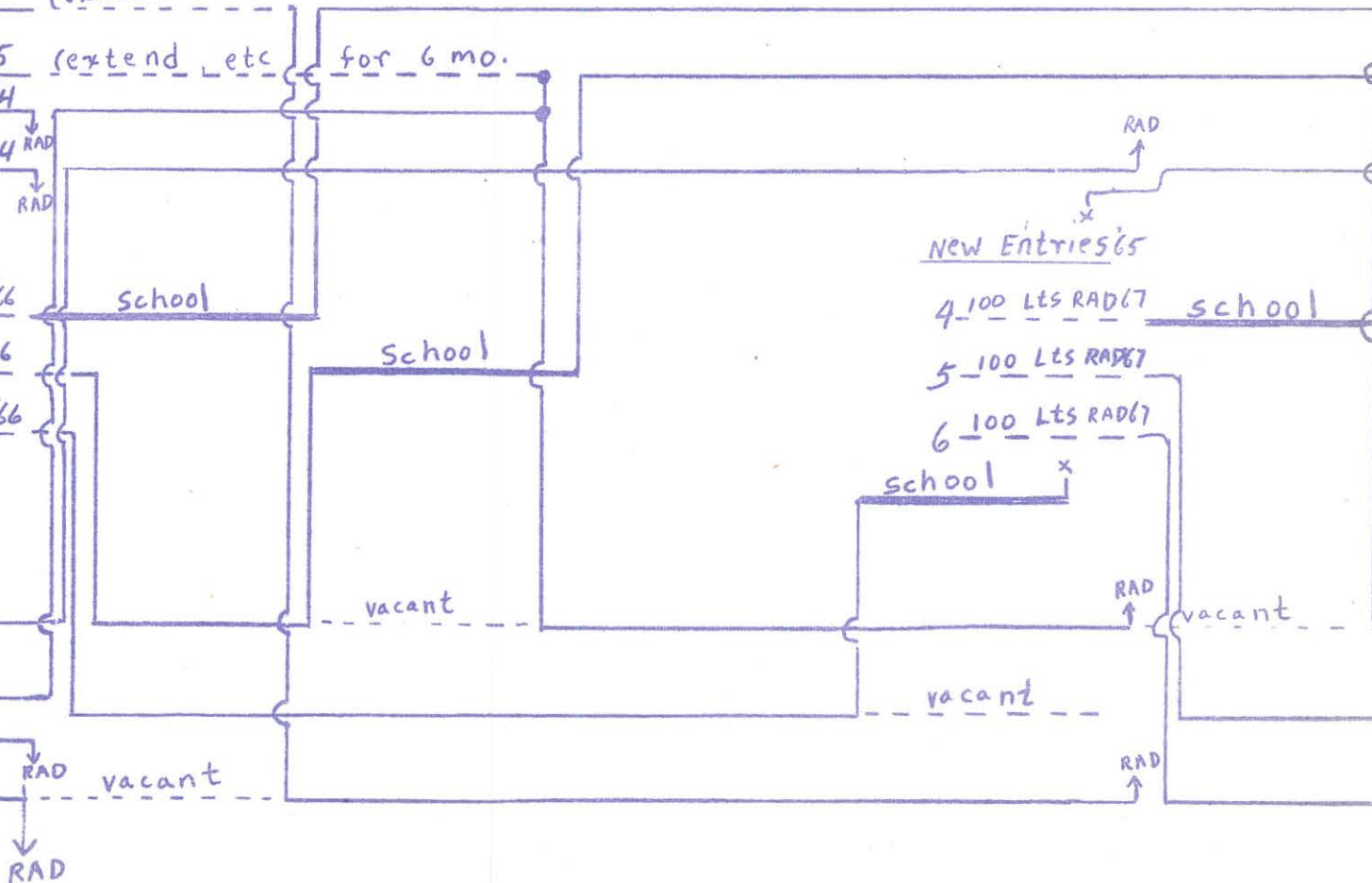
ASHORE

D 100 Lts RAD '65

E₁ 50 Lts RAD '65

E₂ 50 Lts RAD '64

F 100 Lts RAD '64



Detailing Feasibility - sheet 2

1 Jan '66

1 Apr '66

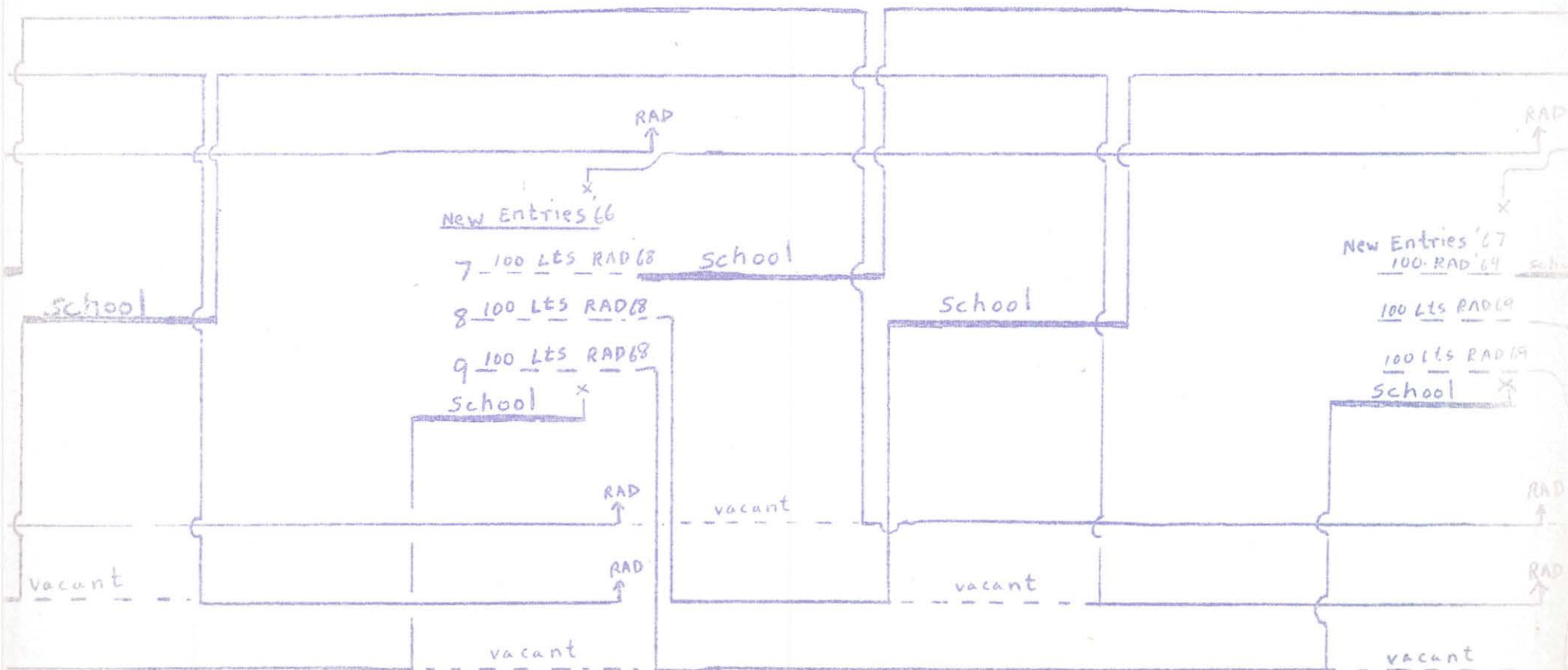
15 Jul '66

1 Oct '66

1 Jan '67

1 Apr '67

1 Jul '67



5. All new medical officers enter the Navy in July-August, therefore:
6. At the start of the program, all sea/shore rotation is occurring in July-August.
7. At the start of the program, half of the sea/shore Lieutenants have completed one year of service; the other half have completed two years, and do not plan to extend.
8. All assignments to the proposed course will come from new-entry Lieutenants (including newly available ex-naval internes).
9. By mid-July, 100 new entries are available for assignment to training.

Explanation of Model (See diagram, opposite)

Group 1 new entries, who would normally relieve line A Lieutenants at sea, are in school. Line A Lieutenants have RAD dates in 1965. They would be extended at sea for 3 months. Line F billets (shore station Lieutenants with RAD dates in July-August 1964) are vacant for 3 months.

Group 2 new entries fill line D shore billets from time of entry until 1 October. Line D billets are vacant 1 Oct.-1 Jan. 1965. Initial Line D Lieutenants relieve Line C Lieutenants at sea for full 12 month period, then RAD.

Group 3 new entries relieve Line E shore Lieutenants until April. Line E billets vacant April to July 1965. Fifty old Line E₁ Lieutenants RAD July-Aug. 1964; other fifty (E₂) relieve fifty line B₂ Lieutenants with RAD July-Aug. 1964 for six month period, then return to Line D billets until RAD July-Aug. 1965.

Fifty billets in Line B₁ must be filled for six month period (July 1964-Jan. 1965). Several arrangements are possible. (See "Assessment" below.)

Assessment

Various detailing solutions will undoubtedly be apparent to those with experience in personnel distribution. Based on the actions chosen

in the model, the following estimates of effect emerge:

1. The system would ensure, after the first year of operation, a continuous flow of medical officers to the fleet, each of whom would be trained to assume his military medical responsibilities from the time of reporting aboard.
2. No more than one third of the annual sea/shore rotations would occur in a given quarter.
3. The scheme would reduce the MO personnel strength of the shore establishment by 100 officers during each school period. Since only 3 twelve-week courses are presented annually, the net permanent loss of clinical manpower would be equivalent to 75 officers.

There would be a one-time-only adjustment phase extending over a 6 month period. 100 officers would be involved for three months and 100 for six months. The model handles this adjustment phase by:

- (a) Extending 100 officers at sea for three months.
- (b) Ordering 50 officers to sea for a short six month tour instead of their anticipated one year tour.
- (c) Covering the remaining 50 sea billets for six months by a variety of ad hoc measures, such as:

1. Voluntary and involuntary six month sea extensions (particularly applicable to choice billets.)

2. Non-filling of MO billets in ships in overhaul, homeport and local training exercises. About one-third of our ships are so employed. Sick calls and sanitary inspections could be conducted by Lieutenants from local shore activities.

3. If necessary, dipping into the shore establishment Lieutenant pool (not shown in the diagram) for short-term (six month) sea assignments.

The long-term cost, therefore boils down to removal of 75 doctors from other duties to furnish the student population. An allowance must also be made for staff personnel. On the basis of previous medical school staff levels, it is estimated that five permanently assigned Medical Officers would be the minimum number needed to conduct a course such as is to be outlined. This figure would assume heavy reliance on guest and Additional Duty speakers, as well as a competent supporting staff, and relatively long lead time to prepare the material for the course. It is a much less generous allowance than previously granted at the School. The manpower cost of training rises, therefore, to about 80 medical officers; approximately 2.3% of the Corps, or one doctor in every 44.

CHAPTER VII

A PROPOSAL FOR A COURSE OF INSTRUCTION

There are many ways of presenting a course, and the complexion of the course will inevitably reflect the bias and the personality of the planner. The author believes that a reasonable division of time would be 10 weeks at the U.S. Naval Medical School, Bethesda, to be followed by a closely integrated final 2 week phase in a Field Medical Service School, or a Fleet training center, as appropriate. This would allow time for staff leave periods, Christmas holiday routine, etc. Since billets must be held at a minimum, the teaching staff would be small, and it is not believed overlapping courses could be handled. Furthermore, as the writer remembers the spaces available in the Medical School, it would probably not be physically possible to conduct two large courses simultaneously there. The director and staff should be granted a measure of autonomy to preserve their enthusiasm; there is nothing more contagious than the enthusiasm of a lecturer--and nothing more dull than an overworked, "canned" lecture. Surgeon General Grier wrote to Medical Director Coues of the Department of Instruction of the U.S. Naval Hospital, New York, in 1878 as follows, "To an officer of your well known ability, acquirements and zeal, it is considered unnecessary to do more than indicate in a general way the course to be pursued." Because the course Director will be dealing with a group of highly intelligent, select individuals recently graduated from first class medical schools, many of them less than enthusiastic about the Navy,

he should have the authority to alter the pace and--within limits-- the content, of the course, in order to accomplish the most effective training. Such a group of students will be quick to detect and criticize rote lectures delivered without conviction.

To cover all the subjects desirable for the military surgeon in a 12 week course is impossible; and training aids cannot greatly shrink the time factor. Because of the large amount of material to be covered, there is a temptation to prepare a too concentrated course; one is then disappointed by a low retention rate. The Medical Officer Indoctrination Syllabus of 1956 is an example of such an error. The author favors "block instruction" and suggests the following choice of week-long topics:

- (1) The U.S. Navy
- (2) The USN Medical Department
- (3) Military and Naval Medicine
- (4) Medical Elements of ABC Weapons and Warfare
- (5) Military Specialties and Special Facilities at NMMC
- (6) Naval Justice and the Medical Officer in Court
- (7) Area Medical Problems

(Orders to be issued at end of this week)

For Officers ordered to sea

- (8) Medical Problems Afloat
- (9) Medical Administration
and Logistics Afloat
- (10) Medical Readiness Afloat

At Fleet center

- (11) Practical Instruction
- (12) Practical Instruction

For Officers ordered to FMF

- (8) Field Medicine
- (9) Medical Administration
and Logistics with FMF
- (10) Combat Medical Readiness

At Medical Field Service School

- (11) Practical Instruction
- (12) Practical Instruction

Comments on these topics follow. The Naval Medical School would be a particularly appropriate place to conduct such a course because of the rich sources of potential speakers in the USN National Naval Medical Center and the Bureau of Medicine & Surgery as well as the Navy Department at large.

Outline of 12 Week Course

Week 1--The U.S. Navy

The first week sets the tone for the entire course. An effort should be made to have the Surgeon General or his Deputy greet the class, and an early address by a senior operational commander should be scheduled. The student medical officers should have a chance to meet the Surgeon General at an informal coffee following his welcome, or at a class cocktail reception during the first week. Administrative details should be smooth, and the students should receive an early overview of the entire course from the Director. A day should be spent on the role and missions of the Navy, the numbered Fleets, their general composition and missions, and the geographic areas in which they operate. Type and functional commands should be explained, and the tremendous back-up required to keep individual units on station. Several hours should be devoted to ships of the Navy, their individual roles, general operating schedules, etc. At least one day should similarly be devoted to the USMC. All of these presentations should be related to the current political and military situation. Lectures should be profusely illustrated with color slides and films of the Navy and Marine Corps. At least one hour should be devoted to the first of a series of weekly medical intelligence briefings, and possibly a similar hour on naval medical history. The afternoon of the final day should feature a talk by the Asst. Chief of BuMed (Personnel and Professional Operations) or the Head of the Detail Division, presenting the billets to be filled by

the class, and expressing his desire to assign in accordance with officer preference whenever possible. He should be available for individual questions and consultation.

Week 2--The Medical Department

This week should provide a general knowledge of the Department, number of medical officers, the Naval Hospital network, etc. Particular emphasis should be placed on Hospitals and dispensaries in major home ports and overseas areas. This should be followed by a presentation of shipboard medical facilities and Marine Corps facilities. The duties of the Medical Officer, as defined by Navy Regulations and BuMed Manual should be elucidated. The role of the Dental and MSC officers, and their relation to the Medical Officer should be considered. Particular emphasis should be devoted to the Hospital Corps; the doctors should be aware of the capabilities and limitations of their enlisted men, the status of the Independent Duty Corpsman. They should be particularly aware of their responsibility towards their Corpsmen. During this week, some time should be spent on the BuMed Manual, Navy Directive System and other official medical information channels. Time should also be devoted to staff and command relations, naval etiquette, wardroom deportment and customs, and responsibilities of the M.O. as a Naval Officer. A very brief outline of medical supply might also be offered to round out the picture of the medical department. All lectures should be slanted to the junior officer, and should not belabor details of higher echelon organization. By the end of this week, student officers should have indicated their duty preferences.

Week 3--Military Medicine

This week should be devoted to medical problems common to both shipboard and field medicine. It should stress the overriding importance of preventive medicine, the maintenance of crew health, and readiness for action. Several lectures on traumatic surgery should be scheduled, including a discussion of missile injuries and wound ballistics. Burn treatment with limited medical resources should be considered. Conduct of sick call, and the responsibility for health records and other medical forms should be briefly indicated (to be considered in more detail later). Several lectures on practical shipboard and field psychiatry should be offered, with stress on the doctor's responsibilities in this area. Food and water inspection, sanitary inspections, teaching obligations, narcotics inventory, venereal disease control, safe employment of pesticides, examinations for drunkenness, transfer and evacuation of patients, preparation for and handling of multiple or mass casualties should be covered. Two hours on emergency dentistry should be included.

This week is a potpourri. It should try to strike a balance between routine and combat medical duties. It should emphasize the essentially independent duty status of most junior medical officers, their total responsibility for providing medical care to the operating unit, isolation resulting from action stations, the non-evacuability of serious patients due to weather conditions, operational priorities, etc. Lectures should be presented by medical officers with recent field or shipboard experience.

Week 4--Medical Elements of ABC Weapons and Warfare

An abundance of teaching material is available for this week. In the atomic weapons field, the doctors should be acquainted with the general practices of shipboard and field stowage and handling of nuclear weapons, their vulnerability to fire, and the potential medical hazards. They should be thoroughly checked out in applicable BuMed rad-safe regulations and recommendations. The doctor ought to be able to discuss radiation sickness intelligently with the commanding officer, and be able to allay any misconceptions he might have, which might affect his battle tactics. Personnel dosimetry and its limitations, the rudiments of shielding and contamination control, and psychiatric appraisal of Special Weapons personnel should also be included. The biological and chemical fields, despite their interest, can only be covered briefly. Emphasis should be on the modern chemical agents.

Week 5--Medical Specialties and Special Facilities at NNMC

As a follow-up to the previous week, a morning should be devoted to submarine medicine, with emphasis on nuclear power and atmosphere control. This could be followed by ½ day in the REAL facility and another ½ day in the Toxicology Center. To further emphasize the importance of radiological medical information, another ½ day might be spent at the Armed Forces Reactor at Bethesda, and visits might be made to the large cobalt source and to Naval Medical Research Institute for discussions of the radiobiology research program. A free day should be allowed for visits of choice to other facilities at NNMC, and another day should be devoted to the Aviation Medicine Program and the Navy's part in space medicine.

Week 6--Naval Justice

Capt. Wilfred Hearn, Commanding Officer, U.S. Naval Justice School, U.S. Naval Base, Newport, R.I., and his staff have very kindly prepared a suggested one-week course for medical officers. The course is reproduced in full in Appendix A. It is specially designed as a first course for medical personnel having no previous acquaintance with military law; about 20% of the suggested course is devoted to such problems as drug offences, the doctor and Article 31, insanity, and malpractice.

Week 7--Area Medical Problems

This week of the course is suggested as a substitute for the formal courses in exotic disease and medical entomology taught in the longer courses offered in previous years. Each day should be devoted to a major operating area, and should emphasize area health problems of current and potential Naval importance. The officers should be instructed in sources of intelligence, current surveys, etc. This would be a good week to discuss the medical officer's responsibility for collecting medical intelligence. Every effort should be made to obtain speakers with recent experience in the area under consideration. It would be a good week to discuss Naval Medical Research Units 2 and 3, and the Preventive Medicine Units. At the end of this week, a formal ceremony should be conducted at which orders are distributed. It might be appropriate to have wives present. An evening cocktail party could add to the zest.

For the last three weeks of the course, frequent use of divided classes should be employed, so that those going to sea will not be exposed to large amounts of FMF material, and vice versa.

Week 8 (a) Medical Problems Afloat

This week commences an intensive, personalized and highly specific portion of the proposed course. In preparation for it, the Director should maintain close liaison with the Detail Officer. As soon as he knows which billets are to be filled, the Director should start gathering specific material regarding the applicable ships or divisions. Over the course of several years, files could be built up. They should include photos, simplified deck plans, information about and detailed plans of medical spaces, battle dressing stations and decon facilities. Fleet, force and squadron directives relating to medical duties should also be obtained, as well as home port medical facilities. Within permissible security limitations, individuals should be informed of deployment schedules.

During the first few days of this week, the doctors should be organized into teams--i.e. those going to destroyer divisions and destroyer tenders, those going to carriers, cruisers, service force units, etc. There should be large amounts of time allowed for individual study during this week, of ships' characteristics, area medical intelligence reports, Fleet and Force medical directives, etc. The officers should be assisted in obtaining further specific information about their ships from BuMed, BuPers and BuShips, and correspondence with the CO and the incumbent MO should be encouraged.

Formal lectures during this week should emphasize specific details of routine shipboard life and medicine..i.e. sick call, sanitary inspections, immunizations, VD control, ship's water, industrial hazards etc.

The entire philosophy of this week should be to orient the doctor to his specific assignment, to stimulate his interest in his ship, and to provide him all possible assistance in obtaining further details. This might very well include referring him to MO's in the Washington area who had had recent assignments in his prospective home port or operations area.

Although this week requires much "footwork" by the course staff, it is believed that this individualized attention to the doctors would prove well worth the effort involved.

Week 8 (b) Field Medicine

Very much the same sort of program should be conducted simultaneously for the officers being detailed to FMF. Instead of details of ships, they would receive lectures on organization of FMF units, with particular emphasis on the medical organization, the equipment at bases and in the field, motor vehicles, etc. Area medical intelligence reports should be of great interest to this group, and time should be allowed for brushing up on specific tropical disease and environmental hygiene problems, utilizing the wealth of material available at the Naval Medical School. A day or two at Quantico might be well worth while, for a "first look" at the Corps. Again, much opportunity should be allowed for individual questions--field uniforms, quarters, etc.etc. As for the ship officers, files of photos and general information should be available for study, from LeJeune, Pendleton and Okinawa, as well as current inspection reports of their units, etc.

Week 9--Medical Administration and Logistics

This week should be devoted to Medical Administration and Logistics. Although often considered a dull subject, it is believed it could be made more palatable by several devices.

(1) Furnish each student a binder of the medical reports he must file, with a check-off list indicating frequency. (Several Line officers in the Newport survey complained that MO's had to be constantly prodded to file their admin reports.)

(2) Where shipboard and field reporting requirements vary, split the class into separate rooms.

(3) In the logistics section, make clear to the doctors the source of supplies--again, on as individual a basis as possible. Copies of the medical section of the Standard Stock Catalogue should be available, as well as ship and field allowance lists, Replenishment Group shopping lists, etc. A good part of a day might be devoted to discussion, with slides, of field medical equipment for the FMF types, mounting out blocks, etc.

(4) The importance of close supervision of personnel records and individual health records must be emphasized. A refresher lecture on the legal implications of naval medical documents by the NNMC legal officer would be timely.

Week 10--Medical Readiness

The first 3 days of this week should have split Sea-Field sessions, and should be devoted entirely to medical preparedness for combat or emergency operations. Shipboard lectures, well illustrated, should

consider General Quarters, Emergency Drills, Conditions of Readiness, Battle Dressing Stations, First Aid Boxes, gun bags, portable medical lockers, etc.etc. Shipboard casualty evacuation, training, relationship to repair parties, ABC warfare, etc. should all be considered.

Field medical officers should receive similar instruction, emphasizing Battalion Aid Station, Company Aid men, treatment in the field, evacuation, communications, field hygiene, equipment, supplies, medical tags, etc.etc.

The classes might profitably be combined on the 4th day for consideration of the amphibious operation with emphasis on medical department organization afloat and ashore, and their interaction.

A variety of guest speakers with combat experience should address the class during this week, and selected combat experiences should be discussed.

The final day should be given over entirely to graduation and checkout.

11th and 12th Weeks--Practical Course

These courses should be planned in close coordination with Fleet and Medical Field Service School commanders. In general, their emphasis should be on practical introduction of the new medical officers into military life; uniform, military courtesy, military formations, quarter-deck and wardroom customs. Doctors should be afforded free time to visit ships of the class they are to join, and to see the spaces at first hand. Guided tours to ships should be conducted, with practical

instruction in sanitary inspection techniques, etc. The make up of this course will depend largely on facilities available, and the personal assessment of the Bethesda Course by the Directors of the Practical Courses.

The courses at Medical Field Service School will depend on the same factors, and should emphasize field exercises with troops conducting training maneuvers, and familiarization with field equipment. Combat loading of medical gear, and, if at all possible, a beach assault, should be scheduled.

CHAPTER VIII

CONCLUSIONS AND RECOMMENDATIONS

1. The furnishing of medical support at sea and in the field is an ancient military responsibility. It has long been recognized as a specialized branch of medicine. Doctors are not adequately prepared for this in medical school or in medical internships. Special training is required, and this has been recognized and furnished by all navies.
2. The training program in the United States Navy was drastically curtailed as a result of the post-World War II acute shortages in medical manpower. It is now markedly inferior to the programs of our Canadian and European allies, several of whom also have acute manpower shortages.
3. The present USN program does not adequately prepare junior medical officers for sea or field duty. This is evinced by complaints from the doctors themselves, by comments and correspondence of senior Fleet and Force Medical Officers, and by many expressions of concern from responsible USN and USMC officers of the Line.
4. The actual number of junior Medical Officers assigned annually to initial general duty with the Fleet and the Fleet Marine Force is about 8.5% of the strength of the Medical Corps. All of these officers could be given a training period of 12 weeks, on a phased basis, at the cost of an overall reduction in effective clinical manpower of about 2.3%.

5. Any such training course should emphasize motivation for acceptance of Naval responsibilities as well as the technical problems of medical practice and administration afloat and in the field. Such a course has been outlined.

Recommendations

1. It is recommended that specialized training in military medicine, of significant scope and length, be phased back into the Navy.
 2. It is recommended that this program enjoy equal status with our present excellent programs for training in the other medical specialties.
 3. It is recommended that priority be given to such training to the three hundred Lieutenants annually assigned to Fleet or FMF billets.
- The highest priority should be accorded to internes graduating from the Naval Hospitals, since a substantial number of these may be expected to remain in the Navy for an extended period.

The Navy's basic mission is to prepare for sustained combat at sea; the Medical Department has an inescapable responsibility to provide the best-trained medical officers it can to support the Fleet in this mission. The doctors who furnish the initial and direct support with the Operating Forces play fully as important a role as those in our centers of definitive care. "Train in Peace or Bleed in War" is as true today as when first pronounced.

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APPENDIX A

MEDICAL OFFICER'S INDOCTRINATION COURSE IN MILITARY LAW

The following course has been developed by the U.S. Naval School of Justice, Newport, R.I. It is their recommendation that the course be taught by an attorney.

Medical Officer's Indoctrination in Military Law

I Introduction to Military Law (One Hour)

A. Brief history and Development of Military Law

1. Naval Law.
2. Army Law.

B. WHY the Uniform Code of Military Justice?

C. The Uniform Code of Military Justice

1. The Manual for Courts-Martial, United States 1951.

II The Military Justice System (Three Hours)

A. Initiation of charges.

B. Investigation of charges.

C. Non-Judicial Punishment.

D. Courts-Martial

1. Summary Courts-Martial
2. Special Courts-Martial
3. General Courts-Martial

E. The military appeal.

III Trial Procedures of General and Special Courts-Martial (Three Hours)

- A. Assembling the court.
- B. Challenges.
- C. Arraignment.
- D. Motions.
 - 1. Dismiss.
 - 2. Appropriate relief.
- E. Pleas.
- F. Presentation of prosecution case.
- G. Presentation of defense case.
- H. Arguments.
- I. Instructions.
- J. Findings.
- K. Presentence procedures.
- L. Sentence.

IV Principal Military Offenses (Three Hours)

- A. Article 86. Absence without leave.
- B. Article 87. Missing movement.
- C. Article 89. Disrespect toward superior officers.
- D. Article 90. Assaulting or willfully disobeying officer.
- E. Article 91. Insubordinate conduct towards noncommissioned officer.
- F. Article 92. Failure to obey order or regulation.
- G. Article 107. False official statement.
- H. Article 112. Drunk on duty.

- I. Article 121. Larceny and wrongful appropriation.
- J. Article 128. Assault.
- K. Article 134. General article.

V Admissibility of Evidence (Two Hours)

- A. The purpose of the rules of evidence.
- B. Forms of evidence.
- C. Basic requirements for admissibility.
- D. Incompetent evidence.
 - 1. Public policy.
 - 2. Unreliability
 - 3. Prejudice to the accused.

VI Punishments

- A. Theory of Punishment (Two Hours)
 - 1. Vengeance.
 - 2. Retribution.
 - 3. Deterrence.
 - 4. Rehabilitation.
- B. General rules governing sentences.
- C. Prohibited punishments.
- D. Limitations based on type of court.
- E. Table of Maximum Punishments.
- F. Limitations based on nature of punishment.
 - 1. Separation from the service.
 - 2. Restraint or hard labor.
 - 3. Money.
 - 4. Rank or rate.
 - 5. Letters of censure.
- G. Permissible additional punishments.

VII The Military Physician and Article 31, UCMJ (One Hour)

- A. The role of the physician in the military community.
- B. The serviceman's responsibilities and rights.
- C. Questions raised by respective duties of physician and serviceman.
- D. Article 31, UCMJ.
 - 1. Scope of protection.
- E. Specific problem areas.

VIII Drug Offenses under Military Law (One Hour)

- A. Violations of lawful General Orders, Article 92.
 - 1. Article 1270, U.S. Navy Regulations, 1948.
- B. Violations of the General Article.
 - 1. Crimes and offenses not capital.
 - (a) Narcotic Drugs Import and Export Act (21 USC 171-185)
 - 2. Disorders and neglects to the prejudice of good order and discipline.
- C. Commonly encountered drugs.
- D. Defenses.

IX Insanity in Military Law. (One Hour)

- A. Lack of mental responsibility.
 - 1. Legal test.
- B. Lack of mental capacity.
 - 1. Legal test.
- C. Inquiry into accused's mental condition.
- D. Raising issue at trial.
 - 1. Motion to dismiss.
 - 2. Motion for a continuance.

E. Legal burdens with respect to sanity.

F. Mitigation and extenuation.

X Fact Finding Bodies (One Hour)

A. Types.

1. Court of Inquiry.

2. Investigations.

a. Formal.

b. Informal.

B. Specific uses of fact finding bodies.

C. Authority to convene.

D. Procedures.

E. The report and record.

XI Misconduct and Line of Duty (One Hour)

A. Necessity for determinations.

B. Special rules for death cases.

C. Responsibility for ordering investigation.

D. Method of reporting.

1. Injury Report NAVJAG-486 (4-61)

E. Misconduct

XIII Malpractice and the service Doctor (One Hour)

A. Definitions.

B. Malpractice action.

C. Proof of malpractice.

- D. Doctrine of res ipsa loquitur.
- E. Doctrine of respondeat superior.
- F. Federal Tort Claims Act.
- G. Trends in malpractice cases.
- H. Safeguards against malpractice claims.

